## WHAT IS CLAIMED IS:

1		1.	A microdevice for supporting a flowing fluid, the microdevice	
2	comprising:			
3		a subs	trate; and	
4		a pair	of generally parallel, spaced wall members on the substrate, wherein	
5	at least one of	f the wa	Il members includes a pair of structures defining an opening.	
1		2.	The microdevice of claim 1 wherein the pair of structures are	
2	beveled struct	tures.		
1		3.	The microdevice of claim 1 wherein the pair of structures are	
2	beveled structures, and wherein each of the beveled structures comprises a pair of			
3	inwardly tapering wall surfaces terminating in an apex.			
1		4.	The microdevice of claim 3 wherein each of the tapering wall	
2	surfaces form an angle of about 2 degrees to about 20 degrees with respect to a side			
3	surface of an	interme	diate portion of the wall member.	
1		5.	The microdevice of claim 3 wherein each tapering wall surfaces is	
2	curved.			
1		6.	The microdevice of claim 1 wherein a distance between the pair of	
2	structures is a	bout 50	microns to about 400 microns.	
1		7.	The microdevice of claim 1 comprising three or more generally	
2	parallel wall	member	rs on the substrate.	
1		8.	The microdevice of claim 1 wherein the spaced wall members	
2	define a fluid	channe	I that contains a fluid with a laminar flow profile.	
1		9.	The microdevice of claim 1 further comprising a cover disposed on	
2	the wall mem	bers.		
1		10.	The microdevice of claim 1 wherein each of the wall members	
2	include an op	ening, a	and wherein the openings in the respective wall members are	
3	substantially aligned to form a slot.			

1		11.	The microdevice of claim 1 further comprising a slide member,		
2	wherein the slide member is disposed on the substrate and is adapted to slide through the				
3	opening.				
_		4.0			
1		12.	An analytical assembly comprising:		
2		the microdevice of claim 1; and			
3		a probe having an end portion that is insertable between the spaced wall			
4	members.				
1		13.	A microdevice comprising:		
_			•		
2		a subs	·		
3		a plur	rality of wall members; and		
4		a plur	rality of fluid channels, wherein each of the fluid channels is defined		
5	by adjacent wall members in the plurality of wall members, wherein each wall member				
6	comprises an opening that is formed by opposed beveled structures of the wall member				
7	and that communicates the adjacent fluid channels.				
1		14.	The microdevice of claim 13 wherein the openings in the		
2	respective wa	ıll mem	bers are substantially aligned to form a slot.		
1		15.	The microdevice of claim 13 wherein the openings in each of the		
2	wall member		ructured to permit fluids having a laminar profile flowing on opposite		
3	sides of respe	ective w	vall members from intermixing.		
1		16.	The microdevice of claim 13 further comprising a cover on the		
2	wall members and a lid spaced from the cover.				

1		17.	A method for detecting a characteristic of a fluid, the method	
2	comprising:			
3		(a) ins	serting a probe into a fluid channel in a microdevice;	
4		(b) de	etecting a characteristic of a first fluid flowing in the first fluid	
5	channel;			
6		(c) m	oving the probe from the first fluid channel through an opening in	
7	one of the wa	the wall members defining the first fluid channel and to a second fluid channel		
8	adjacent to the first fluid channel; and			
9	(d) detecting a characteristic of a second fluid flowing through the second			
10	fluid channel.			
1	,	18.	The method of claim 17 wherein the probe comprises an electrical	
2	cancor	10.	The method of claim 17 wherein the probe comprises an electrical	
2	sensor.			
1		19.	The method of claim 17 wherein at least the first fluid contains	
2	proteins.		•	
1		20.	The method of claim 17 wherein each of the fluid channels has a	
2	width less the		t 1000 microns.	
2	widdi iess tiia	ii abbu	. 1000 interons.	
1		21.	The method of claim 17 wherein the first and the second fluids	
2	comprise a laminar profile.			
1		22	The second of the Colline 17 and arrive (b) (d) are second as ideas.	
1	•	22.	The method of claim 17 wherein (b)-(d) are performed without	
2	exposing an e	na port	ion of the probe to air.	
1		23.	An analytical assembly comprising:	
2		a dete	ection assembly comprising a plurality of detection devices; and	
3		a mic	rodevice comprising a plurality of wall members and a plurality of	
4	fluid channels, wherein each of the fluid channels is defined by adjacent wall members in			
5	the plurality of wall members.			
1		24	The analytical agrambly of claim 22 whencin the about it of	
1 2	detection des	24.	The analytical assembly of claim 23 wherein the plurality of	
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1	25. The analytical assembly of claim 23 wherein the plurality of		
2	detection devices comprise a plurality of optical detectors.		
3 4	26. The analytical assembly of claim 23 wherein the detection devices are disposed in the fluid channels in the microdevice.		
1	27. A method for detecting a characteristic of a fluid, the method		
2	comprising:		
3	flowing a plurality of different fluids through respective fluid channels in a		
4	microdevice, each of the fluid channels in the microdevice being formed by adjacent pairs		
5	of wall members; and		
6	detecting characteristics of the plurality of different fluids substantially		
7	simultaneously using a plurality of detection devices as the different fluids flow through		
8	their respective fluid channels.		
1 2	28. The method of claim 27 wherein the detection devices comprise a plurality of probes, wherein the plurality of probes is insertable within the plurality of		
3	fluid channels.		